# Breeding of *Gypohierax angolensis* in western Angola in 1972

*by R. K. Brooke & R. D. Jeffery*

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R. D. J. revisited from 30th June to 5th July 1972 that part of the Central Cubal River in Angola where he had studied the breeding of Palm-nut Vultures *Gypohierax angolensis* in previous seasons (Brooke & Jeffery 1972). The summer rains of 1971/72 had been very poor and the Central Cubal River had very nearly ceased to flow, a situation that had not been recorded in the previous fifteen years. Palm-nut Vultures were present in their usual numbers. Two occupied nests were found, each containing one egg. One of these nests had been used in 1971 and the other had been built for the 1972 breeding season. Four other 1971 nests still remained but were dilapidated and no attempt had been made to repair them. The remaining 1971 nests had disappeared. Except for the one already mentioned, no new nests had been built or were under construction.

The very low level of breeding activity in 1972 compared with 1970 and 1971 (Brooke & Jeffery 1972) is apparently the result of the preceding summer drought which had brought the flow of the river to a near standstill, since the numbers of Palm-nut Vultures and fruiting Oil Palms *Elaeis guineensis* were no less than before. It may well be that a reasonable supply of fresh water animal food may be necessary to bring Palm-nut Vultures into breeding condition as is the case with the African Marabou *Leptoptilos crumeniferus* (Ciconiidae) which is also both predator and scavenger (Kahl 1966). Thomson & Moreau (1957) showed that Oil Palm nut husks were not necessary to maintain the well-being and breeding capacity of Palm-nut Vultures but were merely the preferred item of diet.

It will be noted that Brooke & Jeffery (1972) thought that *G. angolensis* was more of a fish eagle than a vulture judging by its behaviour and general deportment. In this paper we have called it the Palm-nut Vulture as do most modern writers. This is because Professor Charles Sibley (*in litt.* to R. D. J.) finds that analysis of their egg white proteins suggests a closer relationship to vultures than to fish eagles of the genus *Haliaeetus*.

References:

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# Taxonomy of *Schizoeaca fuliginosa* (Furnariidae), with description of two new subspecies

*by C. Vaurie, J. S. Weske & J. W. Terborgh*

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*Schizoeaca fuliginosa* is an Andean Furnariid distributed from western Venezuela to Bolivia and most of its populations are very poorly known. It inhabits wet areas on the paramos, or an intermediate zone above timber line or above true mountain forest, at altitudes varying, roughly, from about 3,000 metres,

or somewhat less, to about 4,000. The range is more or less widely interrupted by ecologically unsuitable gaps and, before the revision of Vaurie (1971), the six forms that were known were all treated as separate species. However, Vaurie stated that he believed that all the six forms were most probably conspecific because they differ morphologically from one another only in a matter of degree and are all geographically representative.

Vaurie returned to this question in preparing a monographic study of the Furnariidae, using material collected by Weske and Terborgh in 1967–1970 in Peru, in the departments of Ayacucho and Cuzco in mountain ranges east and west of the Apurimac Valley. In 1970, Weske and Terborgh were joined by J. P. O'Neill in Ayacucho, who also collected some specimens incorporated in this study and that are now in the collection of Louisiana State University, Baton Rouge, Louisiana. The other specimens from Ayacucho, and all those from Cuzco, are now deposited in the collection of the American Museum of Natural History, New York.

It is quite evident that the material from Cuzco represents a new form which differs from the other six forms named to date to about the same degree as they differ from one another. The birds from Ayacucho are less sharply differentiated than those from Cuzco, but are, nevertheless, of considerable taxonomic interest as they seem to form a link (though they are not truly intermediate) between the birds taken in Cuzco and the population of *S. fuliginosa* isolated on the plateau of Junin which was named *palpebralis* by Cabanis in 1873.

We have discussed the situation together and describe the two new birds as follows:—

*Schizoeaca fuliginosa vilcabambae* new subspecies

Type: American Museum of Natural History, no. 803123, adult male, collected by Weske and Terborgh, on 22nd July, 1968, at latitude 12° 36′ S by longitude 73° 30′ W, in the Cordillera de Vilcabamba, Cuzco, Peru, at an elevation of 3,190 metres.

Diagnosis: It is difficult to diagnose *vilcabambae* briefly because it differs from the other six subspecies named before this date only by a combination of characters (see below), but its throat is quite distinctly more ochraceous buff, less grayish, than in any other subspecies, the ochraceous area extending to the sides of the lower neck and upper breast.

This new subspecies is based on a series of 12 specimens, all collected by Weske and Terborgh, on 22nd–27th July, 9th August, 1967, and 16th–26th July, 1968. The sex of one was undetermined, the others measure: six males, wing 64 – 67 (65·33) mm, tail 95 – 106 (102), bill (from skull) 16·5 – 18 (17·25); five females, wing 62 – 64 (62·90), tail 95 – 104 (99·60), bill 16·5 – 17·5 (16·70). The type measures, respectively, 64, 105, 17. This new subspecies is known so far only from its type locality and is probably restricted to the northern end of the Cordillera of Vilcabamba.

*Schizoeaca fuliginosa ayacuchensis* new subspecies

Type: American Museum of Natural History, no. 803124, adult male, collected by Weske and Terborgh, on 26th August, 1968, at Puncu, 30 km north-east of Tambo, latitude 12° 47′ S by 73° 49′ W, Ayacucho, Peru, at an elevation of 3,370 metres.

Diagnosis: More nearly allied to *vilcabambae* than to any other subspecies, but gular patch far more conspicuous, and very strongly rufous, bright reddish chestnut rather than rufous cinnamon; pale area below the gular patch much less defined than in *vilcabambae*, and more grayish, rather than

ochraceous buff; pattern of under parts below the upper breast varies somewhat individually, but is much less distinctly squamated as a rule. The rufous gular patch of *ayacuchensis* is considerably darker rufous, more rich, than in any other subspecies of *S. fuliginosa* with a rufous gular patch.

This new subspecies is based on a series of nine specimens collected at Puncu, with one exception, a locality near Uchuy Monte which is only 5 km removed from Puncu. They were taken on 24th–26th August, 1968, by Weske & Terborgh, and on 25th–28th July, 1970, by the same collectors and also O'Neill. They measure: five males, wing 60 – 66 (62·60), tail 100 – 115 (109·0), bill 17·5 – 18·5 (18·30); four females, wing 59 – 63 (60·75), tail 91 – 103 (98·0), bill 16·5 – 18 (17·5). The type measures, respectively, 63, 115, 18·5. This new subspecies is known so far only from the region northeast of Tambo, Ayacucho.

It has been stated that the six subspecies of *S. fuliginosa* known before this date (and now increased to eight) differ from one another in combinations of morphological characters. These characters vary only in degree, and it is impossible to discuss all the permutations in a paper of the present scope, nor germane, as we are not discussing the geographical variation of the species as a whole. The more salient differences are in general size, general coloration of the upper parts, presence or absence of an eye-ring, development and coloration of the superciliary streak, coloration of the chin and gular patch, and pattern of the under parts.

The two isolated populations which approach *vilcabambae* and *ayacuchensis* most closely in distribution are *palpebralis* of Junin, and *helleri* Chapman 1923, which is distributed from the southern end of the Cordillera of Vilcabamba, south to the cordilleras of Vilcanota and Carabaya. No appreciable differences in size exist between the four subspecies; *palpebralis* and *helleri* are rufous brown above, whereas *vilcabambae* and *ayacuchensis* are olive-brown, *ayacuchensis* being somewhat duller and paler than *vilcabambae;* they lack the eye-ring of *palpebralis* and *helleri*, although a few tiny white feathers do exist, irregularly, around the eyelid of three of the nine specimens of *ayacuchensis*. All four subspecies have a very indistinct superciliary streak, which is obsolete, and is rufous in *palpebralis*, and grayish in the other three, when evident at all. All four are rufous on the chin and upper throat, but this gular patch is much better developed in *ayacuchensis* than in any other subspecies; the under parts are very distinctly squamated below the upper breast in *vilcabambae*, much more so than in any other subspecies; these squamations exist in *ayacuchensis* and *palpebralis* but are less distinct, and seem to be lacking altogether in *helleri*.

We are grateful to Dr. J. P. O'Neill, and Louisiana State University, for the loan of three specimens of *ayacuchensis*.

Reference:
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